Archaeology and Language III

Artefacts, languages and texts

Edited by Roger Blench and Matthew Spriggs

ROUTLEDGE

ONE WORLD ARCHAEOLOGY

34

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Roger Blench and Matthew Spriggs

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ASKO PARPOLA

INTRODUCTION

Ārya is the name used of themselves by many (but, *pace* Schmitt 1989a: 1, not necessarily all) of the early speakers of the oldest dialects and languages in the Aryan or Indo-Iranian branch of Indo-European. Any attempt to identify prehistoric 'Aryan' speakers archaeologically has to take linguistic and textual evidence as its starting point – for pots and axes alone cannot tell what language their owners spoke. The earliest and most relevant pieces of textual-linguistic evidence relating to the prehistory of the Aryan speakers come from widely separate places: Aryan loanwords in the Finno-Ugric languages spoken in the forest zone of Northern Europe; proper names of rulers and other Aryan words (many of them associated with horse-training) from the Mitanni empire of Syria *c.* 1500–1300 BC; and the Ṛgveda, a large collection of hymns composed in the northern Indus Valley, most of them probably during the latter half of the second millennium BC. In addition there are the oldest Iranian sources, which will be touched on only briefly: the Avesta, especially its oldest parts, the Gathas of Zarathustra, composed in northern or eastern Iran or in southern Central Asia or Bactria some time between the fifteenth and sixth centuries BC; the inscriptions of the Achaemenid kings of Persia (*c.* 520–337 BC); and the testimony of Herodotus and other classical authors on the Scythians and related Iranian-speaking tribes occupying the Pontic-Caspian steppes between the eighth and third centuries BC. Finally, there is the problematic 'third branch' of Aryan, the Nuristani languages of eastern Afghanistan and northern Pakistan, known only from modern records. Each of these five source groups has its own archaeological implications, which I shall try to spell out and fit together, more or less in the above order, in what follows.[1]

ARYAN LOANWORDS IN FINNO-UGRIC LANGUAGES

The horse, wheeled vehicles and Proto-Indo-European culture

The principal Proto-Aryan word for 'horse', **áćva-*, is clearly inherited from Proto-Indo-European **(H$_1$)ékʷos* (Hamp 1990). The history of the Indo-European words for 'horse' shows that the Proto-Indo-European speakers had long lived in an area where the horse was native and/or domesticated (Mallory 1989: 161–63). The first strong archaeological evidence for the domestication of the horse comes from the Ukrainian Srednij Stog culture, which flourished *c.* 4200–3500 BC and is likely to represent an early phase of the Proto-Indo-European culture (Anthony 1986: 295f.; Mallory 1989: 162, 197–210). During the Pit Grave culture (*c.* 3500–2800 BC) which continued the cultures related to Srednij Stog and probably represents the late phase of the Proto-Indo-European culture – full-scale pastoral technology, including the domesticated horse, wheeled vehicles, stockbreeding and limited horticulture, spread all over the Pontic steppes, and, *c.* 3000 BC, in practically every direction from this centre (Anthony 1986, 1991; Mallory 1989, vol. I).

Various terms associated with the wheeled vehicle represent the most recent technological concept solidly reconstructed for Proto-Indo-European on the basis of most of the Indo-European languages. They are, therefore, temporally of the greatest diagnostic importance for the maintenance of Proto-Indo-European linguistic unity (Mallory 1989: 163; Anthony 1991: 199–201). Archaeological evidence suggests a rapid dispersal of wheeled vehicles from the Near East through Transcaucasia and the Pontic steppes to central and north-western Europe within a few centuries in the late fourth millennium BC (Piggott 1983) (on the Indo-Europeans and the horse, see now Hänsel and Zimmer 1994 [*non vidi*]).

Aryan loanwords in the Finno-Ugric languages of the North Pontic steppes

The distribution and history of the Finno-Ugric languages suggest that Proto-Finno-Ugric was spoken, in the forest belt of north-east Europe from Finland to the Urals, by hunters and fishermen whose (sub-)Neolithic cultures were distinguished by the so-called Comb-and-Pit-Marked Pottery (Mallory 1989: 149; Carpelan 1993: 27ff.). Many of the Indo-European loanwords in the Finno-Ugric languages can be relatively dated by linguistic criteria, and they cover a very long time continuum, dating right back to the early stages of Proto-Indo-European. The source of these Indo-European loanwords is seen in the more advanced neighbouring cultures situated to the south of the above-mentioned area.

Numerous early Indo-European loanwords in Finno-Ugric have long been identified as belonging to the Aryan branch. Thus Proto-Finno-Ugric **śata-* 'hundred' agrees with Proto-Aryan **ćata-* and Sanskrit *śata-* 'hundred', but differs both from Proto-Indo-European **(d)ḱm̥tóm* and from the cognates in other daughter branches (Latin *centum*, Greek *he-katón*, Lithuanian *šimtas* etc). But some Indo-European words borrowed into early Finno-Ugric (e.g. Finnish

kehrä < PFU/Proto-Volga-Finnic **kešträ* / **kesträ* 'spindle') can be recognised as Aryan only from their distribution within the Indo-European family, where the etyma in question are attested exclusively in the Aryan branch (Sanskrit *cattra, cāttra* 'spindle', Pashto *cāṣai* < Proto-Iranian **castra*), while their phonetic shape still exhibits the early Proto-Indo-European stage of development (**ket^{s}tro-* < **kēt^{s}tro-* < **kert^{s}tro-* < **kert-tro-* < **kert-* > Sanskrit *kṛt-* 'to spin'). These words have been borrowed from the Indo-European dialect which later became Aryan *before* the sound changes characteristic of the Aryan branch had developed (Koivulehto 1979, 1991, 1993.) On the other hand, many other Aryan loanwords in the Finno-Ugric languages exhibit phonological characteristics of Iranian, *posterior* to the Proto-Aryan stage (Joki 1973).

The Indo-European loanwords in Finno-Ugric languages suggest that not only was Proto-Indo-European spoken on the steppes of Ukraine and southern Russia, but this was the very region where the Aryan branch came into being. The Proto-Aryan speakers remained in their old Indo-European homeland after the speakers of the other Indo-European dialects had left it and apparently continued to stay there until Proto-Aryan developed into what is now called 'Iranian'. Undoubtedly there were dialectal differences over this vast area early on; for instance, the above-quoted 'Pre-Aryan' word for spindle, reconstructible as **kestro-*, may already display the development *-st-* < IE **-t ^{s}t-* later characteristic of the 'Iranian' branch, while the 'Indo-Aryan' development of IE **-t ^{s}t-* is *-tt-*.

This hypothesis fits the archaeological evidence for the Pontic-Caspian steppes well, for it exhibits an unbroken continuity of very similar cultures from Early Bronze Age to Iron Age: Pit Grave culture *c.* 3500–2800 BC (Chernykh 1992: 56, 83ff.) → Catacomb Grave and Hut Grave/Poltavka cultures *c.* 2800–2000 BC (Gimbutas 1956: 74–89; Chernykh 1992: 98ff.) → Abashevo, Timber Grave and related cultures *c.* 2000–800 BC (Chernykh 1992: 192ff., 235ff.) → Iranian-speaking early historic cultures of the Cimmerians, Scythians and Sarmatians (*c.* 800 BC to AD 300) (Jettmar 1967: 21–64; Rolle 1980; Martynov 1990; Melyukova 1990: 99, 110–11).

Split of the Aryan branch into West Aryan ('Proto-Iranian') and East Aryan ('Proto-Indo-Aryan'): the Timber Grave and Andronovo cultures

If the Pit Grave culture of the Early Bronze Age still represented the late phase of Proto-Indo-European, the Catacomb Grave and Hut Grave or Poltavka cultures of the Middle Bronze Age were probably Proto-Aryan. At the beginning of the Late Bronze Age, at the shift of the third and second millennia BC, a major eastward expansion took place which led to the splitting of this Pontic-Caspian tradition into two strands that became more and more separated from each other geographically in the course of time. This basic archaeological split can be equated with the division of the Indo-Iranian languages into its two principal branches, the 'Iranian' and 'Indo-Aryan'. According to Burrow (1973), this linguistic split should have taken place by *c.* 2000 BC, which neatly agrees with the model suggested here.

We must not be prejudiced or confused by the labels given to these branches on the basis of the distribution of their later historical representatives; to avoid the anachronism inherent in the traditional terms, I propose to call the two early branches West and East Aryan respectively. The 'Iranian' loanwords in Finno-Ugric languages, the connections between Proto-Slavic and 'Proto-Iranian', and the Greek testimonies concerning the Scythians all suggest that the western branch (Abashevo, Timber Grave, etc.), which stayed in the Pontic-Caspian area, represents 'Proto-Iranian' speakers. The eastern branch, Andronovo, which by 1750 BC or even earlier had expanded as far as southern Turkmenistan, northern Afghanistan, Tajikistan, Uzbekistan, Kyrgyzstan, southern Siberia and Xinjiang (Kuz'mina 1985, 1994a, 1994b; Chernykh 1992: 210ff.; and pp. 194–6 below), is likely to represent 'Proto-Indo-Aryan'. As we shall see, this East Aryan branch was also the first to reach Syria and India.

The split started when the need of metals for hard bronze weapons induced part of the Poltavka complex of the Volga-Urals region to move eastwards to the rich ore deposits in the southern Urals and northern and central Kazakhstan. Soon the culture of these migrants developed into the early Andronovo culture of the Petrovka complex (Novyj Kumak horizon, *c.* 2000–1800 BC). In the Urals, the early Andronovo people built strongholds in the vicinity of ore deposits. The layout of the strongholds is square with an inner ring, or round with an inner square; the recently excavated citadel of Arkaim has two encircling walls, whose plan resembles that of the roughly contemporaneous temple-fort at Dashly-3 in Bactria (see p. 191 below). Several Petrovka sites (Sintashta I, Ulyubai, Berlik and Satan) have cemeteries with large barrows where warriors were buried with their entire weaponry, including the earliest evidence for light-wheeled horse-drawn chariots. The chariot has a rectangular body measuring 120 × 60–70 cm, an axle 140 cm wide and two wheels 120 to 90 cm in diameter, probably with 10–12 spokes. The horses of the chariot team were interred with bone cheek-pieces of the same type as found in Shaft Grave IV at Mycenae (Kuz'mina 1994a, 1994b: 67ff., 165ff.; cf. also Gening *et al.* 1992).

The above date of c. 2000–1800 BC for *c.* 1800–1600 given by Kuz'mina and Gening, is an approximation based on personal communication from David W. Anthony (April 1995). Anthony has four Accelerator Mass Spectrometry dates (the most accurate kind) for a chariot burial at Krivoe Ozero. The dates come from bone removed from the skulls of two horses that were lying on the floor of the grave with the chariot. The range is 2124–1975 BC (at a confidence level of 68.3%, or one standard deviation) or 2137–1938 BC (at a confidence level of 95.4%, or two standard deviations). The midpoint, or most probable actual age (the combined average for the four dates), falls between 2032 and 1990 BC. Anthony (personal communication to James Mallory, February 1995) also says that the early Andronovo chariots have about the same axle length as the earlier steppe wagons. This argues for local evolution of the chariot, rather than a borrowing from elsewhere (e.g. Mesopotamia), in addition to the well-known fact that the number

of spokes on the Sintashta chariots is greater than those on the Near Eastern ones, including the earliest now recognised from Anatolia.

THE MITANNI ARYAN

The Indo-Aryan affinity of the Mitanni Aryan

The earliest directly preserved written evidence of an Aryan language is found in documents relating to the rulers of the kingdom of Mitanni in northern Syria, dated *c.* 1500–1300 BC. A Hittite text on horse-training and chariotry written by a Mitannian called Kikkuli employs a number of technical terms which have an Aryan etymology (Mayrhofer 1966, 1974).

It is now generally agreed that Mitanni Aryan is related to the Indo-Aryan rather than to the Iranian or Nuristani sub-branches of Aryan. The deities of the Mitanni oath of 1380 BC comprise Mitra-and-Varuṇa, Indra and the two Nāsatyas. As Thieme (1960) has shown, all these gods are invoked as protectors of treaties in the Ṛgveda (ṚV 10, 125, 1bc). Only Mitra is common to both the Vedic (Indo-Aryan) and the Zarathustran (Iranian) religion, while Varuṇa is known from the Veda alone. Indra, the chief god of the Vedic pantheon, is mentioned in the Avesta only twice (Vd. 10, 9 and 19, 43), both times negatively as a 'demon' together with the likewise demonic Saurva (the Vedic god Śarva) and Nāŋhaiθya (Vedic Nāsatya). The Avestan word for 'demon', *daēva,* goes back to **daiva,* the earlier form of the Vedic word for 'god', *deva,* while the Proto-Iranian word for 'god' is *baga* (related to Old Slavonic *bogŭ* 'god').

Burrow (1973) assumed that the Mitanni Aryans in Syria and the Indo-Aryans in India both came from a 'Proto-Indo-Aryan' homeland, which he placed somewhere in the middle of these two peripheral areas. After the Iranians had come from the northern steppes to southern Central Asia and/or eastern Iran, Zarathustra instituted a religious reform, condemning (Yt. 13. 89–90) the 'Proto-Indo-Aryan' cult of the *daēvas* that had until then prevailed in that area. Burrow points to textual evidence suggesting that worshippers of *daēvas* existed even in Māzandarān, between the Caspian Sea and the Elburz mountains, on the route to Mitanni.

The Mitanni Aryans and Early West Iranian Grey Ware

The Mitanni people were predominantly Hurrian-speaking. The ruling élite of Aryan nobles constituted a minority of external origin. Roman Ghirshman (1977) thought that the Mitanni Aryans had come to Syria from the south-eastern corner of the Caspian Sea. One of his main arguments was the similarity between the dark luxury ceramics of the Mitanni palaces and the Gurgan Grey Ware of the Tepe Hissar IIIc horizon, now dated to *c.* 1900–1700 BC. This similarity is not very close, however, and Ghirshman's derivation has not been generally accepted. Cuyler Young, another leading authority on early Iranian archaeology, has linked the Mitanni Aryans with the Early West Iranian

Grey Ware that suddenly appears in great quantities all along the Elburz mountains, in Azerbaijan and around Lake Urmia *c.* 1500 BC (Young 1985). As Young points out, Early West Iranian Grey Ware represents a major break in the archaeological record of Iran, and hence appears to signal the arrival of new people. These new people cannot yet be the Medes and the Persians, who are first mentioned as being in the Zagros area in Neo-Assyrian textual sources *c.* 850 BC; the coming of the Medes and the Persians is linked by Young with the appearance, in the ninth century BC, of the Late West Iranian Buff Ware, an entirely new pottery in every respect, which is clearly ancestral to Achaemenid ceramics and appears to be derived from the buff wares that appear in the Gurgan region around the eleventh century BC (cf. below p. 198). The Mitanni Aryans would have followed the same route, for Young is inclined to see the Early West Iranian Grey Ware as an evolved form of the earlier Gurgan Grey Ware, which is dated at Tureng Tepe as late as *c.* 1700–1600 BC; in addition, there are linkages in the technology of metallurgy.

'Proto-Indo-Aryans' and the royal cemetery of Marlik in northern Iran

One important Early West Iranian Grey Ware site in Māzandarān in northern Iran is Marlik. Its rich cemetery has produced many weapons, models of battle-chariots, horse burials, and prestige objects imported from Syria and Palestine, as well as seals of the Mitanni type. All these features suggest Marlik's connection with the Mitanni Aryans. In addition, Kurochkin has pointed out some significant characteristics:

> The Indo-Iranian religion characteristically combines a fire cult with the ritual drinking of *soma*. A fire altar and a 'teapot' for ritual libations were found in the funeral shrine at Marlik (Negahban 1964). The rich tombs of Marlik contained mortars with an open spout and pestles, apparently used for pressing out juice from plants, as well as models of battle-chariots. This combination of rather unusual grave goods is in striking agreement with Vedic funerary texts. These namely prescribe a mortar (*ulūkhala*) and a pestle (*musala*) as well as a (model) wagon (*śakaṭa*) to be placed at the legs of a deceased Indo-Aryan man who had established sacred fires (Caland 1896: 51).
>
> (Kurochkin 1994: 394)

Kurochkin derives the main elements of the Marlik material culture from the earlier Bronze Age of north-eastern Iran (Tepe Hissar IIIc) and Bactria. One may add that the habit of placing cart models in graves can be traced back to the Hut Grave and Catacomb Grave period in the North Pontic steppe (Gimbutas 1956: 78; 1965: 207).

'Proto-Indo-Aryans' and the golden bowl of Hasanlu

Hasanlu, near Lake Urmia, is another important site associated with the Early West Iranian Grey Ware in the second half of the second millennium BC.

The famous golden bowl from Hasanlu V, dated to the Early Iron Age (*c.* 1500–1000 BC), follows Near Eastern models in its iconography. Thus there are clear Hurrian and Anatolian parallels to the upper register: two attendants bringing sacrificial sheep follow a standing king or priest, who pours a libation to three deities approaching him one after the other: first the winged weather god in his bull-drawn chariot, then the sun god (with the winged disk on his head) and the moon god (wearing horns) both driving a chariot drawn by a mule or onager. The motifs of the lower register, too, have Near Eastern parallels (Porada 1965: 96–102; Mellink 1966) However, Gennadi Kurochkin (1994) has convincingly argued for an Aryan affinity of the bowl. Kurochkin notes that a hero dressed in a peculiar skirt appears twice in the lower register. In one scene the hero is associated with a bird of prey that carries a man, and in another scene he is combating a god within a mountain that ends in a three-headed dragon and is supported on a lion. Also in the lower register is a goddess standing on two rams and unveiling her nudity. In the Avestan hymn to the Goddess Anāhitā preserved in the fifth Yašt, the hero θraētaona is also mentioned twice: first in connection with his battle with the three-headed Aži-Dahāka (Yašt 5.33–34) and secondly when he helps the hero Pāurva by making him fly up to heaven in form of a bird of prey (Yašt 5.61).

Kurochkin's Aryan parallels are from Iranian sources, but the former myth at least is pre-Iranian, for θraētaona the son of Āθwya has an exact counterpart in the Ṛgveda, namely Indra's associate Trita Āptya, who slew Viśvarūpa, the three-headed son of Tvaṣṭṛ (see Rönnow 1927, 1930–32). The Avestan name of the three-headed beast, Aži, corresponds to Vedic Ahi 'snake, dragon', used of Indra's demonic enemy and is also reminiscent of the snake or dragon motif so frequently found on the Bronze Age seals of Bactria and Margiana (see below p. 194). Moreover, Dahāka, the epithet of the dragon in the Avesta, connects this adversary with the Dāsas, against whom the Indo-Aryans of the Ṛgveda were fighting (see pp. 191–92). The Hasanlu bowl thus seems to reflect 'Proto-Indo-Aryan' mythology, though the myths and deities involved are likely to be just modifications of earlier Near Eastern prototypes.

Gurgan Grey Ware (Tepe Hissar IIIc), the BMAC and the 'Proto-Indo-Aryans'

The Bactria and Margiana Archaeological Complex (BMAC), unearthed by Viktor Sarianidi and other Russian archaeologists since the 1960s, is a direct continuation of the long cultural tradition of the Kopet Dagh region further west, which in the late Namazga V period (*c.* 2200 BC) extended to the oases of Margiana. In the early second millennium BC, however, this colony was transformed through its adoption of a new social system. A highly stratified society is implied by the abundance of locally produced luxury goods, the strongly fortified monumental architecture and the construction and maintenance of an elaborate irrigation system that was the economic basis of the culture (Hiebert 1993, 1994, 1995). Hiebert and Lamberg-Karlovsky (1992) have convincingly argued that the BMAC spread from Margiana to Bactria and then also to Kerman, Seistan, and eastern Baluchistan; and they explain

the similarities of the Gurgan sites and Tepe Hissar IIIc in the same way (Hiebert 1994: 177). Hiebert and Lamberg-Karlovsky (1992) interpret this in terms of 'state expansion', planned military raids, and possibly the first introduction of the Aryan language into the Iranian plateau.

Ghirshman (1977) had already advanced numerous arguments in favour of an Aryan identification of the Gurgan Grey Ware complex; these arguments must now be understood as covering the BMAC as well. He traced the horsemanship for which the Mitannians were so famous back to the Gurgan plain, where a locally made cylinder seal from Tepe Hissar IIIb bears the representation of a horse-drawn chariot. Miniature models of trumpets, made of gold and silver, have been found in the Gurgan area (Tepe Hissar IIIc; Treasure of Astrabad) as well as in Bactria. As Ghirshman pointed out, trumpets were needed for directing chariots in battle, and an Egyptian bas-relief of Ramses III (early twelfth century BC, soon after intensive Egyptian contacts with Mitanni) shows that trumpets were used in training horses. Horse bones have been found in Gurgan (Shah Tepe), but so far not in Bactria or Margiana. The horse is, however, represented on several of the ceremonial weapons said to come from the looted graves of Bactria. The abundance of weapons itself suggests that the ruling élite of the BMAC actively engaged in warfare.

An important argument for the 'Proto-Indo-Aryan' linguistic affinity of this warring élite is the spread of the BMAC to India. The French excavations at Quetta as well as at Mehrgarh-7 and Sibri on the Kachi plain, near the Bolan Pass leading from Baluchistan to Sindh, have revealed burials and cenotaphs which, like their rich grave goods, are typical of the BMAC (Jarrige 1991; 1994). Their date coincides with the beginning of the Late Harappan cultural phase, represented by the Jhukar culture in Sindh; the Jhukar culture predominantly continues the traditions of the Indus Civilisation, but has some new elements, like seals of Bactrian affinity. The similarity of Bactrian and Gangetic swords, sharing antennae-shaped hilts, suggests that BMAC-related intruders may also have been connected with the later phases of the 'Copper Hoards' culture in the northern parts of central and eastern India (Parpola 1988).

A locally made BMAC cylinder seal, known from an impression on a potsherd from Taip-depe in Margiana, was divided into two registers by means of a plait. This is a device inaugurated in Syria in the eighteenth century BC at a time when Assyria was trading with Cappadocia and importing tin from the east. The source of this tin may have been in central and northern Afghanistan (Kandahar and Badakshan), where the Harappans and the Bactrians appear to have obtained their tin (cf. Collon 1987: 142f.). On the other hand, from the eighteenth century BC onwards north Syrian seals show such a typically Central Asian motif as the two-humped Bactrian camel, which is depicted in the BMAC seals several times (cf. Brentjes 1987: 135); camel bones have been identified at Gonur-1 (Meadow 1993: 72–73). There are also a number of other parallels (and not only in glyptics): e.g. the copper mirrors with anthropomorphic handles that have been found in Bactria and Baluchistan go back to Egyptian prototypes via Syria. These cultural contacts between

the Syro-Hittite world and the BMAC suggest that important cultural influences came to the BMAC from the west. But this does not necessarily imply that the hypothetical Aryans of the BMAC themselves are of West Asian origin, as suggested by Viktor Sarianidi (1993b, 1994a). Rather they attest to the intensification of direct contacts and foreshadow the take-over of power in Syria by the Mitanni Aryans, supporting their Central Asian origin.

The BMAC and the early Andronovo culture

The BMAC emerged as a direct continuation of the long cultural development in southern Turkmenia. This local origin can be reconciled with the hypothesis of the BMAC élite's linguistic affinity with the Aryan branch of Indo-European only by assuming that the dramatic change in the socio-political structure of the BMAC *c.* 1900 BC resulted from a take-over of power in Margiana by small groups of Aryan nomads coming from the north. In fact, a few sherds of hand-made 'steppe' ceramics most similar to the Fedorovo variety of Andronovo pottery have been found in the BMAC period buildings in Margiana (Hiebert 1994: 69f.; cf. also P'yankova 1993; 1994). The early Andronovo culture was strongly stratified, as shown by the rich tombs of its chiefs, and it possessed fortifications, horse-drawn chariots and a flourishing metallurgy, including weapons of many kinds (see pp. 183–84). All these traits now become prominent in the BMAC (though the horse is clearly rare and not yet attested osteologically) and distinguish it from the preceding cultural phases. A close analogue for this take-over of power is provided by the Mitanni empire: a small number of 'Proto-Indo-Aryan'-speaking chariot warriors superimposed themselves upon the native Hurrian-speaking population around 1500 BC, when the Early West Iranian Grey Ware culture intrusively arrived in the vicinity. The assumed parallel *coup d'état* in Margiana probably took place fairly peacefully – somewhat in the manner of the Vikings who were 'invited' to become the first kings of the Russians – because no evidence of destruction has been encountered.

THE VEDA

The Gandhara Grave culture of Swat (Ghalegay IV Period) and the Bishkent and Vakhsh cultures

Turning now to the textual evidence on the early Indo-Aryans supplied by the Ṛgveda and to its archaeological implications, we must first observe that the place names mentioned in this collection of hymns locate it to within a fairly restricted area in the northern Indus Valley. At the end of the Ṛgvedic period the majority of the people seem to have lived on the plains of the Punjab along the Indus and its tributaries, but some of the Ṛgvedic tribes continued to occupy the northern valleys of the Kabul and Swat rivers. These northern areas are generally considered to be the region through which the Ṛgvedic Aryans arrived in the subcontinent (cf. the maps in Witzel 1989: 233 and 242).

The intrusive Gandhara Grave culture of Swat (*c.* 1700–1400 BC), representing the fourth period in the cultural sequence of the valley as defined by the Ghalegay cave, is the first to possess the horse in this region; this animal is prominent in the Ṛgveda. At Bīr-koṭ-ghwaṇḍai, for example, the horse is present both in the motifs of painted pottery and osteologically (Stacul 1987: 106–09; 137–40). In its area of distribution, the Gandhara Grave culture largely coincides with that of the Dardic group of Indo-Aryan languages, the Dardic languages being the only ones to preserve traces of some distinctly Ṛgvedic dialectal variants such as the gerund in *-tvī*. Inhumation in graves is the predominant mode of disposal of the dead in Swat, but cenotaphs and the cremation ritual also appear here for the first time in South Asia; both methods are known from the Ṛgveda.

The spread of the Gandhara Grave culture to the Punjab in the sixteenth century BC and its concomitant acculturation to the Cemetery H culture (which prevailed in the Punjab from Late Harappan times, *c.* 1900 BC) agree with the textual evidence from the Ṛgveda, which speaks of battles in the plains. The mixing with people speaking a different Indo-Aryan dialect is visible in the intrusion of non-Ṛgvedic dialectal forms of Indo-Aryan and of new subject matter into the latest books of the Ṛgveda.

Giorgio Stacul (1987: 122) has suggested that the pottery of the Ghalegay IV period resembles the BMAC pottery of Dashly in Bactria. The similarities seem to be indirect, as Dashly ceramics have influenced the pottery of the north Bactrian Vakhsh culture (cf. P'yankova 1986: 74). A large number of scholars, including Hermann Müller-Karpe (1983: 117f.), Nataliya Chlenova (1984) and Bertille Lyonnet (1994), have suggested that the origins of the Gandhara Grave culture are to be sought in the approximately contemporaneous Bishkent (or Beshkent) and Vakhsh cultures of south Tajikistan (Mandel'shtam 1968; P'yankova 1989), less than 500 km away. Chlenova and Lyonnet emphasize that the route connecting the Vakhsh and Bishkent cultures with Swat was followed even by later steppe invaders of India, including the Yüeh-chih or Kuṣāṇas around the first century BC and the Hephtalites or White Huns in the fifth century AD.

The similarities between the Gandhara Grave and Vakhsh/Bishkent cultures concern not only ceramics but also, and especially, grave forms and burial rituals. The trait of burying deceased males on their right side and females on their left connects the Swat culture with the Bishkent culture (cemetery of Tulkhar) (Müller-Karpe 1983: 118) and further with the closest group of steppe nomads, the Tazabag"yab Andronovo (Kokcha 3) in Chorezmia and Andronovo in general (Francfort 1989, I: 429). Another important trait connecting the Swat and Biskent cultures is the burial of couples in the same grave (Müller-Karpe 1983: 44f., 98, 101, 118), possibly connected with the Vedic practice of making the widow lie down on the deceased's right side and then stand up again (Caland 1896: 42f.).

One recurring feature in the Bishkent graves in particular led Mandel'shtam (1968: 126) to connect them with the Vedic cult of sacred fires: men's

graves had square-shaped ritual fireplaces, women's graves round fireplaces. Mandel'shtam compared them with the square-shaped *āhavanīya* fireplace and the round *gārhapatya* fireplace of the Vedic ritual, in which the latter represents the domestic hearth.

The Bishkent burials are inhumations. Vedic texts, however, prescribe inhumation only for specific individuals like the ascetics (Caland 1896: 93ff.). But some Vedic ritual texts mention a virtually obsolete habit which has rightly been considered as a relict of an earlier inhumation ritual: the stomach of the deceased is opened, the entrails are removed, cleaned, filled with clarified butter and replaced, whereafter the opening is closed by sewing it with *darbha* grass (Caland 1896: 14–16, 166; cf. also Müller-Karpe 1983: 100). That this is a Proto-Aryan custom is suggested by a striking parallel that seems to have escaped earlier attention. The frozen tombs of Pazyryk in Altai, dated to the Scythian/Saka period, have preserved bodies embalmed by a similar method (Rudenko 1970; see now also Polosmak 1994). The same embalming process is precisely described by Herodotus (4, 71) as current among the Scythians of the Dnieper.

Cremation, evidenced at Swat, was practised by the Andronovo tribes of the Fedorovo type (P'yankova 1982: 44; Kuz'mina 1985: 37). Cremation is suggested by the great number of cenotaphs with anthropomorphic figurines of unburnt clay in the Vakhsh culture (but none in the Bishkent culture) (Lyonnet 1994). Anthropomorphic clay figurines are also known from the Swat graves (Müller-Karpe 1983: 105–08).

The Bishkent and Vakhsh cultures and the BMAC

The Bishkent and Vakhsh cultures have long been seen as resulting from the fusion of nomads coming from the northern steppes with BMAC-related agriculturalists coming from the south-west. Vinogradova (1993) has modern ethnographic parallels and suggests that both components acted as middlemen in the intensive exchange of goods (agricultural products and craft ceramics from the south and copper and tin ingots from the north). The anthropological type of the Bishkent culture, though also Mediterranean, differs from that of the Vakhsh culture and the settled farmers, which are similar to each other. Many of the steppe elements have been connected with the Andronovo culture, especially the Fedorovo and Tazabag'yab varieties, but Mandel'shtam and Lyonnet point out that 10 per cent of the Vakhsh ceramics are of a type unknown both in the Andronovo and BMAC cultures. Lyonnet also stresses that the culture of the nomads in south Tajikistan is extremely poor, especially in metal objects, and there is no indication of social differentiation.

The Bishkent and Vakhsh cultures represent the late Mollali phase of the Sapalli culture, the North Bactrian variant of the BMAC, corresponding to the Takhirbaj period in Margiana (*c.* 1700–1500 BC). It is significant that the beginning of this period coincides with the 'collapse' of the BMAC, which continues without a break but in a much impoverished form and with lesser social differentiation. It seems conceivable that nomadic tribes associated with

the Vakhsh and Bishkent cultures took over the BMAC, as was once argued (cf. Biscione 1977: 115; Parpola 1988: 230). Yet there is no visible 'Andronovisation' of the culture, although horse bones and terracotta models of spoked wheels have been discovered at several sites in southern Turkmenia (Francfort 1989, I: 429f.). This suggests that, once again, the conquerors had quickly taken over and adapted themselves to the earlier local culture, the BMAC. Such an interpretation of the archaeological evidence would agree with the legends which the Ṛgvedic hymns preserve about the battles of the most ancient Vedic kings against rich enemies called *Dāsa, Dasyu* and *Paṇi*.

The Dāsas of the Ṛgveda and the BMAC

Important clues to an archaeological understanding of the Ṛgvedic invasion are provided by the references to the enemies of the Ṛgvedic Aryans. Indra and his protégés, the earliest Ṛgvedic kings, are said to have destroyed the strongholds of these enemies. When Sir Mortimer Wheeler unearthed the huge defensive walls of Harappa in 1946, he identified the Dāsa forts as the fortified cities of the Indus Civilisation (Wheeler 1947: 78–82). This hypothesis was widely accepted until Wilhelm Rau (1976) in his study of the relevant Vedic passages, showed that, unlike the square layout of the Indus cities, the Dāsa forts had circular and often multiple, concentric walls. Moreover, the Dāsa forts were not regularly inhabited cities but only functioned as temporary shelters, particularly for the protection of cattle. I have argued that the Dāsas, Dasyus and Paṇis were actually Indo-Iranian speaking BMAC nobles, and that the battles against them described in the Ṛgveda took place in and around northern Bactria, before they entered Gandhāra on the eastern side of the Hindu Kush (Parpola 1988: 208–18)

Bactria and Margiana is the region where the Dāsas, Dasyus and Paṇis are placed in Old Persian, Greek and Latin sources. In Sanskrit, the word *dāsa* is used with the meaning 'slave', but this sense is due to the fact that people with the ethnic name Dāsa were taken captive in war, just as the English word *slave* originally denoted a captive *Slav*, or the Finnish word *orja* 'slave' a captive *Aryan*. Many peoples call themselves by their native word for 'man' or 'human being'. The tribal name *Daha* originally appears to be a noun meaning 'male person, man, hero', since it survives as such in Khotanese Saka *daha*. The Wakhi word *dāi, ɗayək*, which has the same meaning, goes back to Old Iranian *dahyu* from earlier *dasyu*. The Dāsas, Dasyus and Paṇis should therefore actually have spoken an Aryan language, though one dialectally different from that of the Ṛgvedic Aryans (Parpola 1988: 219–24).

A fortified ceremonial centre with three concentric circular walls was found at the BMAC settlement in the oasis of Dashly-3 in north Afghanistan. This is so far the only one of its kind known (more might be found in the mountainous areas where the Ṛgveda places Dāsa strongholds), but Kutlug-tepe demonstrates that the tradition of building forts with three concentric walls survived in Bactria until Achaemenid times. The form of these forts agrees with the description of a 'threefold fort' *(tripura)* in the Śatapatha-Brāhmaṇa

(6, 3, 3, 24–5). In later Vedic and Hindu mythology, *tripura* is usually the abode of Asuras, 'demons', opposed to Devas, 'gods'. The Ṛgveda speaks of 'a hundred forts' of the Dāsa, while the Aryans themselves are never said to have had anything but fire or river as their 'fort'. The later Vedic texts confirm this by stating that when the Asuras and Devas were fighting, the Asuras always won in the beginning, because they alone had forts. This suggests that the earliest Ṛgvedic Aryans were newcomers in Bactria, which they must have passed if they entered Swat *c.* 1700 BC. The Ṛgvedic Aryans describe their enemies as rich and powerful, defending their cattle, gold and wonderful treasures with sharp weapons, horses and chariots. This description fits the BMAC in Bactria, with its finely decorated golden cups, weapons with ornamental animal figures including the horse, and trumpets indicative of chariot warfare (Parpola 1988: 216–18).

The gods of the Dāsas and Ṛgvedic Aryans and the Mitanni Aryans

The Dāsas worshipped gods called Asuras, which were 'demons' for the Aryans, while the Aryan gods were called Devas. It is true that, after the fusion of the Aryans and Dāsas, even Aryan gods like Indra are occasionally called Asura, though Indra originally bore the title 'slayer of Asuras'. The foremost Asura is Varuṇa, often paired with Mitra. In the Avesta, Varuṇa is not mentioned but has an exact counterpart in Ahura (Mazdāh), whom Zarathustra, after the coming of the Iranian tribes, re-established as the highest god in eastern Iran instead of the *daēva* Indra, whom he condemned as a demon: the Avestan compound *Miθra-Ahura* corresponds to the Vedic and Mitanni compound *Mitrā-Varuṇā*. Ṛgvedic hymns indicate that some early Aryan kings entered into alliances with the 'irreligious' enemy, and that some rich Dāsa kings like Balbūtha Tarukṣa started worshipping Indra. Apparently in order to secure the loyalty of their newly won Dāsa subjects, early Aryan kings made a compromise and adopted the cult of Varuṇā, the principal god of the former enemy. In Ṛgveda 10, 124, 5, Indra invites Varuṇā to join the ranks of the Devas as a king after the defeat of the Asuras. In view of the background sketched above, two corollaries may be deduced from the fact that *both* Indra *and* Varuṇā are invoked in the Mitanni oath of 1380 BC:

1 the amalgamation of early Ṛgvedic Aryans and Dāsas must have taken place in Bactria (and probably also in Margiana) before the Ṛgvedic Aryans entered India, and
2 the Mitanni Aryans can have come from Bactria (and Margiana) only *after* this amalgamation of early Ṛgvedic Aryans and Dāsas had taken place (Parpola 1988: 224–29).

The BMAC connection with the Goddess worship and eastern India

We saw earlier (p. 189) that the Gandhāra Grave culture, after some centuries in Swat, descended to the plains of the Punjab and fused there with another cultural tradition. This acculturation process may explain the cultural and

linguistic change that took place in the Vedic literature after the Ṛgvedic period. A case in point is provided by the phonemes and case forms which in Classical Sanskrit are more archaic than in the Ṛgvedic language, and which in the early Brāhmaṇa texts start replacing the latter. I have suggested that these two different dialects of Old Indo-Aryan represent two separate waves of Aryan tribes that entered the subcontinent by different routes. This may be understood as a modification of the old two-wave hypothesis of Rudolf Hoernle and George A. Grierson, based on the distributional pattern of the Neo-Indo-Aryan languages and rightly criticised by Michael Witzel (1989: 235).

In the same way we can explain, for instance, why the word *asura* – which at first meant 'demon' for the Ṛgvedic Aryans, then became a respectable title of the Aryan gods too, and finally more or less fell out of use in the Ṛgveda – suddenly once again became very popular in the Brāhmaṇa texts with the meaning 'demon'. Apparently people worshipping gods called Asura, related to the Dāsas encountered many centuries earlier in Bactria, were once again rivals and competitors of the Vedic Aryans. Ancient and modern tribal names derived from Dāsa are in fact known from the Indus Valley (cf. Parpola 1988: 262).

An ancient Indian tradition seems to exist that has preserved information relating to the Dāsas independently of the Ṛgvedic tradition. One example is the Sanskrit word *tripura,* unknown to the Ṛgveda but used in the Brāhmaṇa texts for the strongholds of the Asuras (cf. Norman 1990: 291). This word *tripura* has important religious implications. I shall only briefly deal with the religion of the BMAC, which I have examined elsewhere (summary in Parpola 1988: 251–64; 1992; 1993b; 1994: 255f.; in press). There is evidence for the worship of a goddess connected with lions (for a new BMAC seal with this motif see Sarianidi 1993c), ultimately going back to the traditions of the ancient Near East. (The Dāsas as early East Aryan overtakers of the BMAC culture did not themselves bring the cult of the lion-escorted goddess from the steppes, but adopted it in Margiana or Bactria or on their expeditions in Iran.) Connections with the later Indian worship of Durgā, the goddess of victory and fertility escorted by a lion or tiger, the protectress of the stronghold (*durga*), are suggested by several things. The ground plan of the Dashly-3 'palace' is strikingly similar to the Tantric maṇḍala (Brentjes 1981; 1986: 234; 1987: 128f.), the ritual 'palace' of the god or goddess in the Hindu cult. A Bactrian seal depicting copulating couples, human and animal, recalls the orgies associated with the principal festival of the goddess. Durgā is worshipped in eastern India as Tripurā, a name which connects her with the strongholds of the Dāsas.

Of course the Śākta tradition of eastern India is far removed from Bactria and the Dāsas, both temporally and geographically. But the distance between these two traditions can be bridged by means of Vedic and epic evidence relating to Vrātya religion and, archaeologically, by the strong resemblance between the antennae-hilted swords from BMAC Bactria and the Gangetic Copper

Hoards (*c.* 1700–1500 BC). The linguistic data associated with the Dāsas also link them with the easternmost branch of Middle Indo-Aryan, the Māgadhī Prakrit. The age-and-area principle of anthropology suggests that the earliest wave of Indo-Aryans was the first to reach the other end of the subcontinent.

The problem of Soma

The Ṛgvedic Aryans make it clear that the religion of the Dāsas differed greatly from their own Ṛgvedic religion: it is expressly said that these enemies did not worship Indra nor press Soma. Indra is the most popular deity of the Ṛgveda, the god of war and thunder, and a central element in Indra's cult was a drink originally called **Sauma*: Vedic *Soma* corresponds to Avestan *Haoma,* the cultic drink which Zoroastrianism evidently adopted from the earlier Bronze Age religion of Central Asia and eastern Iran. Indra was undoubtedly associated with Haoma also in this religion against which Zarathustra rebelled – Indra is invoked by the Mitanni Aryans in 1380 BC – but he was dethroned and made a demon by Zarathustra. Other early Indo-Europeans did not drink **Sauma* (cf. Norman 1990: 292f.). Therefore it seems unlikely that this cult was started in the Pontic Caspian steppes, which was probably the Indo-European homeland, or by the Proto-Aryans or Proto-West-Aryans ('Proto-Iranians'), who all seem to have occupied that same area. Soma is likely to be an East Aryan innovation.

The botanical identity of the Soma plant has been debated for a long time, but most specialists nowadays opt for *Ephedra sp.* (Falk 1989; Nyberg 1995; for different views, see Wasson 1971; Flattery and Schwartz 1989). In Margiana, Viktor Sarianidi has discovered vessels for which he claimed that chemical analysis showed they contained organic remains of *Ephedra* (Sarianidi 1987; 1990: 102ff., 203ff.; 1994b). These vessels come from Togolok-21 and Gonur-1, from white-plastered rooms having platforms along walls with sunk-in vessels, and adjoining rooms having ceramic stands and sieves with holes at the base. Their ritualistic function is also suggested by other finds from these temples, including 'miniature columns', fragile clay bowls with animal figurines along their rims, and seal-amulets showing winged dragons (a BMAC motif reminding us of the Aži-Dahāka 'the Dāsa dragon' apparently depicted on the Hasanlu bowl, see p. 186). A third 'temple' of the same kind was found at Togolok-1, with lime-plastered grooves on the floor. At Gonur-1 the ritualistic vessels are said to have also contained remains of poppy and cannabis, while at Togolok-21 traces of poppy were found on stone mortars and pestles (Sarianidi 1993a, 8; 1993b; Kussov 1993).

These finds, potentially representing the earliest available evidence of the Soma cult, have aroused great interest, but the conclusions drawn seem to be premature. Scrapings of the 'Soma' vessels were analysed independently at the Department of Botany in University of Helsinki with negative results (Nyberg 1995). And Fred Hiebert (1994: 124–29) interprets the plastered rooms as communal rooms for large-scale production or storage. Only *if* these 'Soma' vessels can irrefutably be proved to contain *Ephedra,* can we suppose

that the assumed Dāsas of Margiana did in fact press Soma, and that early Andronovians of the Petrovka phase may have introduced that cult. In that case, the Dāsas whom the Ṛgvedic Aryans encountered in Bactria would have given up their original Soma cult and adopted the earlier local rituals (cf. Norman 1990: 292f.). But, as long as there is no clear proof for the existence of Soma in the BMAC culture of Margiana, we must assume that the use of *Sauma was started only during the Alakul'-Fedorovo phase of the Andronovo culture.

The *Sauma cult may actually have its origin in the Afanas'evo culture of southern Siberia and Xinjiang (*c.* 3000–1800 BC) which, with good reasons, has been identified with the Proto-Tocharians (cf. Mallory 1989: 56–63, 223–26; the Tocharian texts of the sixth to eighth centuries AD come from the Tarim basin). Small parcels containing twigs of *Ephedra sp.* have in several instances been found on the chests of bodies buried in shaft pit graves of the Afanas'evo/early Andronovo-related Gumugou I culture in the Lopnor region of the middle Tarim basin in Xinjiang (*c.* 2000–1550 BC; Chen and Hiebert 1995, quoting the excavator Wang Binghua). *Ephedra* twigs, bound together with woollen strings into loose packets, or tied up into small bags of the funeral mantle, were found in a number of graves in five separate graveyards of the Han period in the Lopnor region (graveyards L.F., L.Q. and L.S., see Stein 1928: I, 265, 268; II, 736f., 740f., 743, 748; Cemetery 5 or 'Ördek's necropolis', and graves in the delta of Qum-darya, see Bergman 1939: 70–73, 86f., 91f., 99, 134, 136f., 139). As other similar bags placed in the same graves contained grains of wheat, 'there could be little doubt about the contents being meant to represent provisions for the dead in another life' (Stein 1930–32: 502–3). The survival of this regular funeral practice from Gumugou I to Han times suggests cultural continuity over a long period of time (Chen and Hiebert 1995). Therefore, it may well be in Xinjiang that the Andronovians, here assumed to be ancestors of the Ṛgvedic Aryans, adopted the *Sauma cult, and the same applies to the Sakā Haumavargā, who in 500 BC occupied the area around Ferghana (cf. pp. 196–7). An additional reason to suspect an eastern origin for *Sauma is that *Ephedra sinica* Stapf, *ma-huang* in Chinese, *ma-ō* in Japanese, 'has been used as a medicinal herb in China since well before the Christian era' (Brough 1971: 361). The ephedrine yielded by this plant 'is a powerful stimulant, and would thus be a more plausible preparation for warriors about to go into battle than [Wasson's candidate for *Sauma] the fly-agaric, which is depressant' (ibid.).

THE 'IRANIAN' LANGUAGES

The Early Iron Age cultures of Yaz-I, Chust and Xinjiang and their relation to East Aryan

The last phase of the Bronze Age in Margiana (Takhirbaj Period) and in Bactria (Mollali Period) is succeeded by the Early Iron Age culture of Yaz I

(*c.* 1500–1000 BC) without any break (at Yaz I and in Bactria the earlier wheel-turned pottery continues side by side with the new hand-made ceramic). The Yaz I culture is characterised by a hand-made painted ceramic with triangle and ladder motifs, known from southern Turkmenia, Margiana and from Bactria (Tillya Tepe I-II; Kuchuk Tepe I-II). The Yaz I culture has been thought to reflect the sedentarisation of nomads coming from the steppes. Yaz I culture is connected with the Chust culture of Ferghana, with Mundigak V-VI in Seistan as well as Pirak I-III on the Kachi plain in Baluchistan. At Pirak, terracotta figurines of mounted horsemen appear in layers I and II. Unlike the Tazabag'yab culture of Chorezmia and the Chust culture of Ferghana, Yaz I culture does not have any known necropolises, nor is even a single tomb known from this region before the coming of the Greeks. It has therefore been suggested that the appearance of the Yaz I culture may signal the arrival of the Zoroastrian mode of disposal of the dead by exposure (Francfort 1989, I: 423f., 430–38; Lyonnet 1994).

Generally speaking, the geographical milieu reflected in the Gathas of Zarathustra overlaps that of the Yaz I culture: there has been, and still is, much debate about the homeland of the prophet, but he is usually placed in Seistan or Bactria-Margiana (cf. Schmitt 1989b: 25–26). The date of Zarathustra is even more controversial: while some scholars defend the traditional date of the Zarathustran clergy, which places the prophet in the sixth century BC, many date him to *c.* 1000 BC, and some even to the fifteenth century BC (Kellens 1989: 35–36).

I am indebted to Fred Hiebert (personal communication, March 1995) for the following new information, which is most important for the issue at hand. The Yaz I and related cultures seem to derive, via the Chust culture (1750–1200 BC??), from the Haladun culture (1750–1200 BC) of Xinjiang. Besides Haladun, the following other early oasis cultures of Xinjiang exhibit the Chust-like painted pottery and other traits including stone and bone tools: Yanbulake culture (*c.* 1750–1200 BC), Xintala culture (1750–1200 BC) and Aidinghu culture (1500–1000 BC). A small amount of grey- or black-coloured pottery testifies to contacts that these latter cultures have had with the Alakul'-Fëdorovo variety of Andronovo culture, while especially the earliest oasis culture of Xinjiang, the Gumugou I culture (*c.* 2000–1550 BC) is also related to the Afanas'evo culture. The northernmost oasis of Keermuqi (*c.* 1750–1000 BC) represents the Siberian Afanas'evo-Andronovo-Karasuk lowland variant (Chen and Hiebert 1995). The Andronovo contacts of the cultures of Xinjiang between *c.* 1750–1000 BC suggests that their Europid upper strata may well have spoken East Aryan. Their coming to Ferghana and Central Asia as Yaz I and related cultures makes the Bishkent culture of Ferghana and the related Ghaleghay IV culture of Swat look like a vanguard of the Sauma Aryans who are now pouring in greater numbers to the Indo-Iranian borderlands and southern Central Asia.

The Iron Age II cultures of Xinjiang and Central Asia and the East Iranian languages

Although the distribution of the Xinjiang-Chust-Yaz I cultures discussed above tallies almost exactly with the distribution of the East Iranian languages, they seem far too early for this identification. Besides, such an identification would make it exceedingly difficult to explain the formation of the Iranian branch, which appears to be associated with the Pontic-Caspian steppes and with an early separation from the Andronovo culture (pp. 182–4). It is easier to explain the appearance of East Iranian (Proto-Saka) in Xinjiang with the far-ranging and speedy changes involved in the spread of iron technology and mounted warriors that revolutionised the steppe cultures everywhere at the end of the second millennium BC, leading to the largely unified Scytho-Saka-Siberian nomadic steppe civilisation that was 'Iranian' speaking (Barfield 1989: 1; Akishev 1990; Martynov 1990; Zadneprovskij 1990). Apparently this spread of new technology and material culture was accompanied by the spread of the 'Iranian' languages, which submerged the earlier languages, just as happened later with the quick and vast spread of the Turkic-speaking peoples in the early centuries of the Christian era.

A profound culture change takes place around 1000 BC also in the oasis cultures of Xinjiang. The rich 'Saka' culture of highland mounted pastoralists (*c.* 1000–400 BC) now makes it appearance in the Ili valley, along the northern slopes of Tian Shan, and elsewhere. The oasis cultures of Qunbake also have relations to Saka, while Chawuhugoukou and Sidaogou are both in contact with Karasuk/Maiemir/Saka; all three are dated c. 1000–400 BC, before Buddhism arrives in Xinjiang (Chen and Hiebert 1995; cf. also Debaine-Francfort 1988–89 and 1990).

Buddhist texts written in two Saka dialects in Khotan and Tumshuq in Xinjiang date from the seventh to tenth centuries AD. The Sakas who arrived in Bactria *c.* 130 BC and later ruled western India probably came from Fergana and Xinjiang along the same route as the Yaz-I-related people more than a thousand years earlier.

In Central Asia, the Yaz I culture, characterised by painted ware, is succeeded *c.* 1000 BC by Yaz II–III culture (Kuchuk Tepe III, Tillya Tepe III, Nad-i Ali I), with unpainted, wheel-thrown ceramics, whose forms go back, via Yaz I, to the Bronze Age traditions of these same regions. While there is obvious continuity in many things – among others, the absence of graves and cemeteries continues – several novelties are introduced, among them iron technology and the breeding of the horse. This culture continues until the Achaemenid times (Francfort 1989 I: 438–42). The Yaz II–III culture seems to be the best match for the early Avestan world. The similarity of Zarathustra's gāθās with Ṛgvedic poetry and shared linguistic innovations between Ṛgvedic and Avestan, like the masculine nominative plural of the *-a-* stems, are understandable if the language of the Yaz I culture – the substratum of Avestan – was closely related to Ṛgvedic. The arrival of East

Iranian in Xinjiang (Proto-Saka) and Central Asia (Avestan) around 1000 BC would make good sense also in relation to the chronology of West Iranian.

Late West Iranian Buff Ware and Proto-West-Iranian

Cuyler Young (1985) connects the 'Proto-West-Iranian' speakers with the Late West Iranian Buff Ware: this ceramic first appears *c.* 1100 BC in the Gurgan plain and then spreads westwards to the sites of the Median and Persian kingdoms (see pp. 184–5). Late West Iranian Buff Ware is related to the ceramic horizon of 'archaic Dahistan' in the Atrek Valley on the east coast of the Caspian Sea, where it is considered to represent an intrusive culture ([Khlopin] Chlopin 1986: 32; Brentjes 1986: 236).

Pirak III Grey Ware, Painted Grey Ware and Middle Vedic/Early Epic Indo-Aryan

The Painted Grey Ware (PGW) culture, flourishing between 1100 and 350 BC in the Madhyadeśa, the upper Ganges Valley, compares closely with the Middle and Late Vedic culture temporally, spatially and in terms of cultural content. The use of iron and a grey ceramic ware in the Painted Grey Ware phase may have spread to India from Central Asia and the Iranian plateau mainly through Baluchistan, where the two traits are documented at Pirak III (*c.* 1100 BC) (Jarrige and Santoni 1979). Linguistically, we may compare the name of the Kuru kings, in whose realm around Kuruk&etra the earliest post-Ṛgvedic dialect was spoken (cf. Witzel 1989: 224ff.), with the name of the West-Iranian-speaking founder of the Persian Empire. Thus, north India may have received a small number of (West) Iranian-speaking newcomers around 1100 BC, but they would have been linguistically assimilated by Indo-Aryan without any major trace.

The Megaliths of the Deccan, Iran and the Caucasus, and the Pāṇḍava heroes of the Mahābhārata

The earliest Iron Age period in the Deccan, *c.* 1100–800 BC, is essentially a continuation of the preceding Chalcolithic culture, with the addition of the iron daggers and arrowheads that appear in graves. As in the Chalcolithic period, the graves are simple pits, which may have a ring of stones around them, and which may be covered by stone slabs or a mound. The burials are always complete inhumations. With the arrival of the Megalithic culture around 800 BC, however, a completely new mode of disposing of the dead was introduced. From now on, the burial in ossuaries of bones that have previously been exposed for excarnation and then broken gradually becomes predominant.

McIntosh (1985) has established several temporally distinct types of megaliths which have spread from north to south, starting *c.* 800 BC. The earliest sites are in ancient Vidarbha, in north-eastern Maharashtra. The settlement pattern consists of a habitation mound surrounded by megalithic stone circles with burials. There is evidence of advanced metal technology, including

iron-smelting. Important finds are copper ornaments for the face and flanks of horses, which have parallels at early Scythian sites. Horses fully equipped with such ornaments and trappings, as well as iron bits, were buried together with the dead (some of whom had met a violent death) in almost all megalithic circles. The excellent carpentry tools fit in with the discovery of postholes for habitation huts 2 metres in diameter, with a semicircular hearth of clay inside. These dwellings recall the yurts of the Central and East Asian nomads.

To the first megalithic phase (*c.* 800–550 BC) belong also the cists made of stone slabs, usually with a porthole in the eastern slab. Temporally and geographically, the nearest large group of porthole megaliths are the cemeteries in the Kuban region east of the Black Sea and in the Caucasus, dated to the early centuries of the first millennium BC. These two groups are linked by porthole megaliths at the Sialk B necropolis (*c.* 1000–800 BC) in northwestern Iran and at Las Bela in South Baluchistan. These burials are of broken bones, and the grave goods include horse furniture and iron weapons. The megalithic cairns of Moghul Ghundai in Baluchistan have been compared with Sialk B, which is supposed to reflect the coming of Iranian tribes from the steppes north of the Caucasus. Bands of Cimmerians are known to have come from the Kuban area over the Caucasus to Iran around 800 BC (Jettmar 1967: 23–25, 48–50). Thus the Megalithic culture may have been brought into India by horse-riding and warring nomads, probably speaking a West Aryan/Old Iranian language. In India, the invaders adopted the local Black-and-Red Ware, which is the characteristic ceramic of the megaliths. Like the Śakas who later ruled western India, the Megalithic invaders were comparatively few in relation to the earlier inhabitants and are likely to have quickly become linguistically assimilated to the local Dravidian speakers (Parpola 1994: 171f.).

In North India, the Megalithic invasion may be the historical reality behind the white-skinned Pāṇḍavas, who, coming from Rajasthan (Virāṭa), conquered the Kuru kings. Their polyandrous marriage customs resemble those of the Scythian-related Massagetae described by Herodotus (1, 216). The Pāṇḍavas are first mentioned in Late Vedic texts, and their association with Mathurā (Kṛṣṇa) also places them into the later phase of the PGW (from *c.* 800 BC) (Parpola 1984).

THE NURISTANI LANGUAGES

A major problem in the coming of the Indo-Iranian languages to Central Asia, Iran and India concerns the formation of the 'third branch', which has survived in isolation for millennia in the northern valleys of Pakistan and Afghanistan and retained its affricates, for example, at the Proto-Aryan level (Nelson 1986). One distinct possibility is that the 'Kafir' or Nuristani languages go back to the language of the Bactrian Dāsas, whom I have assumed to be the very earliest Aryans to arrive in these Indo-Iranian borderlands (cf. pp. 186–8 and 191–5).

SUMMARY: LIST OF SUGGESTED CORRELATIONS

Archaeological culture	*Language grouping*
Srednij Stog and Khvalynsk cultures (*c.* 4500–3500 BC)	Early Proto-Indo-European
Pit Grave culture (*c.* 3500–2800 BC)	Late Proto-Indo-European
Catacomb Grave and Poltavka cultures (*c.* 2800–2000 BC)	Proto-Aryan
Early Timber Grave and Abashevo cultures (*c.* 2000–1800 BC)	Proto-West-Aryan (ancestor of the 'Iranian' branch)
North Pontic and Timber Grave cultures (*c.* 1800–800 BC)	West Aryan
Early Andronovo (Petrovka) (*c.* 2000–1800 BC)	Proto-East-Aryan (ancestor of the 'Indo-Aryan' branch)
BMAC (*c.* 1900–1700 BC) in Margiana and Bactria and Gurgan Grey Ware (*c.* 1900–1700 BC) in northern Iran	Proto-Dāsa (at first, language of the ruling élite, an early offshoot of Proto-East-Aryan; in Bactria and possibly in Hindu Kush, these Dāsas were the enemies subdued by Proto-Ṛgvedic Aryans *c.* 1700 BC)
Mehrgarh VIII/Sibri/Jhukar (*c.* 1900–1800 BC) in Sind, Cemetery H (*c.*1900–1400 BC) in the Punjab, Late Ochre-Coloured Pottery–Gangetic Copper Hoards (*c.* 1900–1000 BC) in Upper Ganges Valley	Indian Dāsa (offshoot of Proto-Dāsa), whence Proto-Vrātya [= archaic substratum of Middle Vedic/Early Epic Indo-Aryan] and Proto-Māgadhī
Andronovo (Alakul'-Fëdorovo) (*c.* 1800–1000 BC) in Kazakhstan, southern Central Asia, southern Siberia and Xinjiang	East Aryan including (perhaps in Xinjiang only?) Proto-Sauma-Aryan
Early Gandhara Grave culture (Ghalegay IV) in Swat (*c.* 1700–1400 BC)	Proto-Ṛgvedic = Proto-Dardic (offshoot of Proto-Sauma-Aryan via Bishkent in Ferghana)
Takhirbaj-Mollali culture (Late phase of BMAC) (*c.* 1700–1500 BC) in Gurgan, Margiana and Bactria	Proto-Sauma-Dāsa (= Proto-Dāsa overlaid and assimilated by Proto-Sauma-Aryan)
Early West Iranian Grey Ware (*c.* 1500–1000 BC)	Proto-Mitanni-Aryan (an offshoot of Proto-Sauma-Dāsa)

Painted Ware cultures of Xinjiang (*c.* 1750–1000 BC) (of Early Andronovo + Late Afanas'evo derivation) → Chust culture of Ferghana (*c.* 1750–1200 BC??) and Yaz I-related cultures of southern Central Asia (*c.* 1500–1000 BC)	A later wave of Sauma Aryan (offshoot of East Aryan) overlaying Proto-Sauma-Dāsa
Late Gandhara Grave culture (Ghalegay V, *c.* 1400–800 BC) in Swat and the Punjab	Late Ṛgvedic with partly assimilated newcomers of West-Aryan derivation (??) = Proto- Nuristani (??)
Iron Age cultures of Xinjiang (*c.* 1000–400 BC)	Proto-Śaka, an offshoot of Late West Aryan, overlaying and assimilating Late East Aryan
Yaz II–III-related cultures of southern Central Asia and Seistan	Proto-Avestan, an offshoot of Late West Aryan, overlaying and assimilating Sauma Aryan
Gurgan Buff Ware (*c.* 1100–1000 BC) → Late West Iranian Buff Ware (*c.* 900–700 BC) in northern Iran	Proto-West-Iranian (Proto-Median and Proto-Old-Persian), an offshoot of Late West Aryan, overlying and assimilating Proto-Mitanni-Aryan
Early Painted Grey Ware (*c.* 1100–800 BC) in the plains of North India	Middle Vedic/Early Epic Indo-Aryan (an offshoot of Late Ṛgvedic/Dardic) overlaying and assimilating Indian Dāsa (Kuru kings possibly an incoming élite of Proto-West-Iranian origin)
Early Megalithic culture of India (*c.* 800–500 BC), possibly derived from Kuban via the Caucasus	Proto-Cimmerian (offshoot of Late West Aryan) becoming assimilated to Dravidian (in the Deccan) and to Sanskrit (in North India see next)
Late Painted Grey Ware culture (*c.* 800–400 BC) in the plains of North India	Late Vedic/Late Epic Indo-Aryan (the 'pale' Pāṇḍavas possibly Megalithic invaders of West Iranian origin subduing the old Kuru rulers)

Another possibility is that the violent arrival of new people from the west, which initiated the Ghalegay V phase in Swat (*c.* 1400–800 BC), brought the Nuristani peoples to the western border of the Dardic languages. This position on the western edge of the Dardic area suggests that the Nuristani languages came from the west later than the Dardic languages and not vice versa, as is generally assumed. In Swat the newcomers would have merged with the (presumably more numerous) Proto-Ṛgvedic (Proto-Dardic)-speakers assumed to represent the Ghalegay IV phase. The Nuristani deaspiration is an important isogloss with the Iranian languages, though the development is identical only with regard to the voiced aspirates. Thus the Nuristani languages might have arrived as a kind of vanguard of the Iranian languages (Parpola 1988, 243–48).

The most characteristic, intrusive trait of the Ghalegay V culture is the 'face-urn', a funeral pot (containing the ashes of the dead) with a human face. It has analogies in Transcaucasia in the third millennium BC, in the Danube Valley in the middle of the second millennium BC, and (with some differences) at Sialk B in western Iran around the beginning of the first millennium BC. According to Fred Hiebert (personal communication, March 1995), the Xinjiang cultures do not have any anthropomorphic ceramics. Temporally, the Danube parallels are very close, suggesting the possibility of an early wave of West Aryan-speaking horsemen. The issue cannot be decided without archaeological excavations in Nuristan.

NOTES

1 The present paper is a condensed and further developed version of Parpola (1995); both are based upon and revise Parpola (1988), a much longer essay, which should be consulted for a more detailed treatment and documentation of many issues discussed only briefly here – see Parpola (1997) and (1998).

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